



Utah Army National Guard



Transforming EMS Compliance at the Utah National Guard with an Automated Tool

Environment, Energy & Sustainability Symposium

May 2009

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ISO 14001 Compliance Challenges



> Questions

- How many of you are on track to meet full ISO 14001 conformance?
- How many of you already have full ISO 14001 conformance?
- Are you able to easily demonstrate conformance with custom reporting?
 - › This presentation is for those who answer “no”

EO 13148 EMS Directive



Executive Order (EO) 13148, "Greening the Government Through Leadership in Environmental Management," directs all Federal agencies as follows:

- By 31 December 2005, each agency shall implement an environmental management system at all appropriate agency facilities based on facility size, complexity, and the environmental aspects of facility operations.
- The facility environmental management system shall include measurable environmental goals, objectives, and targets that are reviewed and updated annually.
- Once established, environmental management system performance measures shall be incorporated in agency facility audit protocols.¹

U.S. Army Environmental Management System: Commanders Guide

WHAT IS AN EMS?

An EMS is the part of an organization's overall management system that integrates environmental concerns and issues in the organization's management processes. An EMS helps organizations avoid environmental problems by increasing awareness and developing sustainable activities and processes.

EMS REQUIREMENTS, POLICY, AND STANDARDS

Executive Order 13148

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- Once established, environmental management system performance measures shall be incorporated in agency facility audit protocols.¹

The Army policy on EMS, described below, implements the requirements of EO 13148 at Army installations.

¹ Executive Order 13148, "Greening the Government Through Leadership in Environmental Management," 21 April 2000.

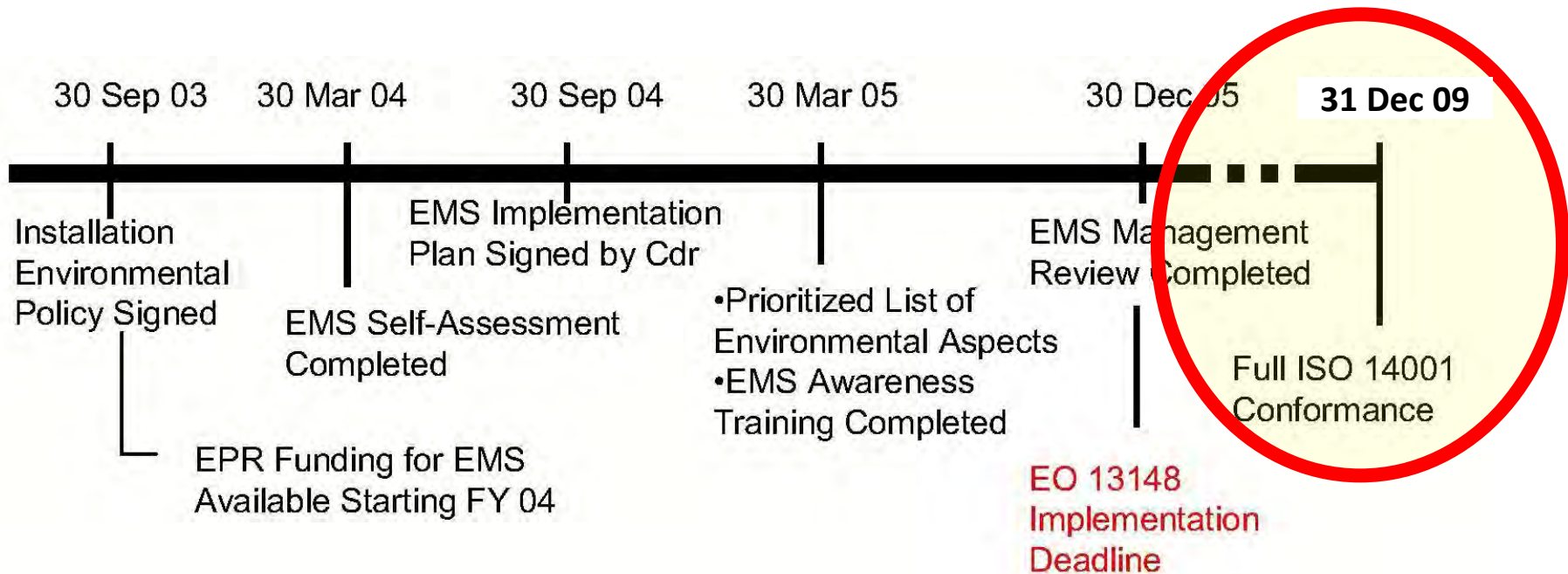
¹ Executive Order 13148, "Greening the Government Through Leadership in Environmental Management," 21 April 2000.

ISO 14001 Compliance Challenges



> Army EMS Implementation

- Requires full ISO 14001 compliance by Sep 09
- Only 3 NG facilities declared conformance to date



ISO 14001 Compliance Challenges



- > Continual improvement
 - Recognize improvements
 - Partial is better than perfect
 - > If perfect is never achieved

EMS IMPLEMENTATION CHALLENGES

Involving and Obtaining Commitment from All Functional Areas

One of the biggest changes associated with EMS implementation is cultural: responsibilities for environmental issues expand from the environmental staff to *every leader, soldier, and civilian employee*. This shift requires a new awareness and commitment from all functional areas on the installation.

Maintaining Momentum over a Multiyear Process

Fully implementing an ISO 14001–conforming EMS takes several years, and maintaining momentum can be a challenge. Leadership and top management support are critical for emphasis and recognition. There will be some frustrations as implementation progresses, so accept them and focus on continual improvement to address the problems. The partial solution that is implemented is always better than the perfect solution that never makes it off the drawing board.

Involving Top Performers

EMS implementation is an intellectually challenging task and requires the involvement of your top performers. Contractors can provide some valuable support, but key installation personnel must provide the bulk of the effort because they are the ones who own, understand, and take responsibility for the installation's activities, products, and services. Look for ways to redistribute workloads and provide time for the implementation team members to focus on the task.

MAP FOR EMS IMPLEMENTATION

1. Implementation Guidance

The Army has developed a recommended sequence of activities, shown in Figure 3, to implement a mission-focused, ISO 14001–conforming EMS. The *U.S. Army Environmental Management System Implementers Guide*, the companion to this guide, contains detailed implementation instructions. The implementation sequence shown in Figure 3 addresses the Army's implementation metrics and includes all of the EMS elements required by the ISO 14001 standard.

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ISO 14001 Compliance Challenges



> EMS will enhance mission focus

- Proactively identify issues
- Improve awareness
- Address sustainability

EMS IMPLEMENTATION CHALLENGES

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ROADMAP FOR EMS IMPLEMENTATION

Specific Implementation Guidance

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- U.S. Army Environmental Management System Commanders Guide; pg 6; June 2003 -

EMS Implementation with WebEMIS



> ISO 14001 Conformance Tool

- Planning
- Tracking
- Reporting
- Accountability
- Management Indicators
- Trends



*EMS
Performance
Metrics*



Enabling Proactive vs. Reactive Strategy



> Automated tool to facilitate:

- Aspects and impacts
- Goals and objectives
- Document tracking and version history
- Tracking all activities, tasks, and inspections

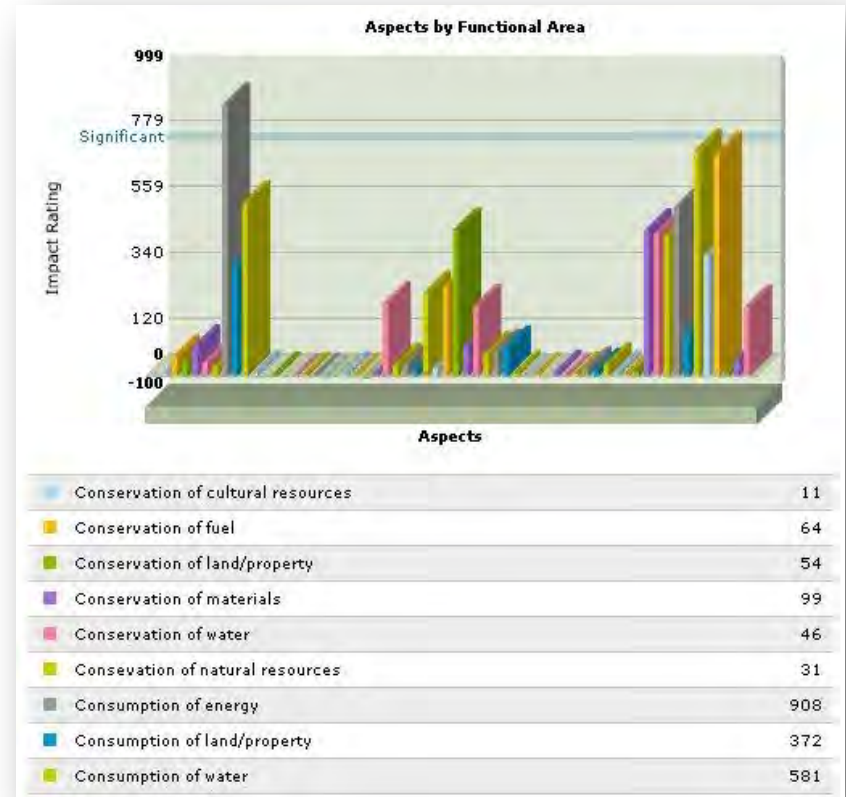
> Not just to manage documents, but:

- Create audit trail
- Ensure accountability
- Shift from reactive to proactive strategy
- Manage indicators

Measured Progress → Informed Decisions



- > Provides visibility into EMS progress and supporting data
 - Roles-based interface
 - Compliance tasks
 - Document review and expirations
 - Precise reporting for auditing

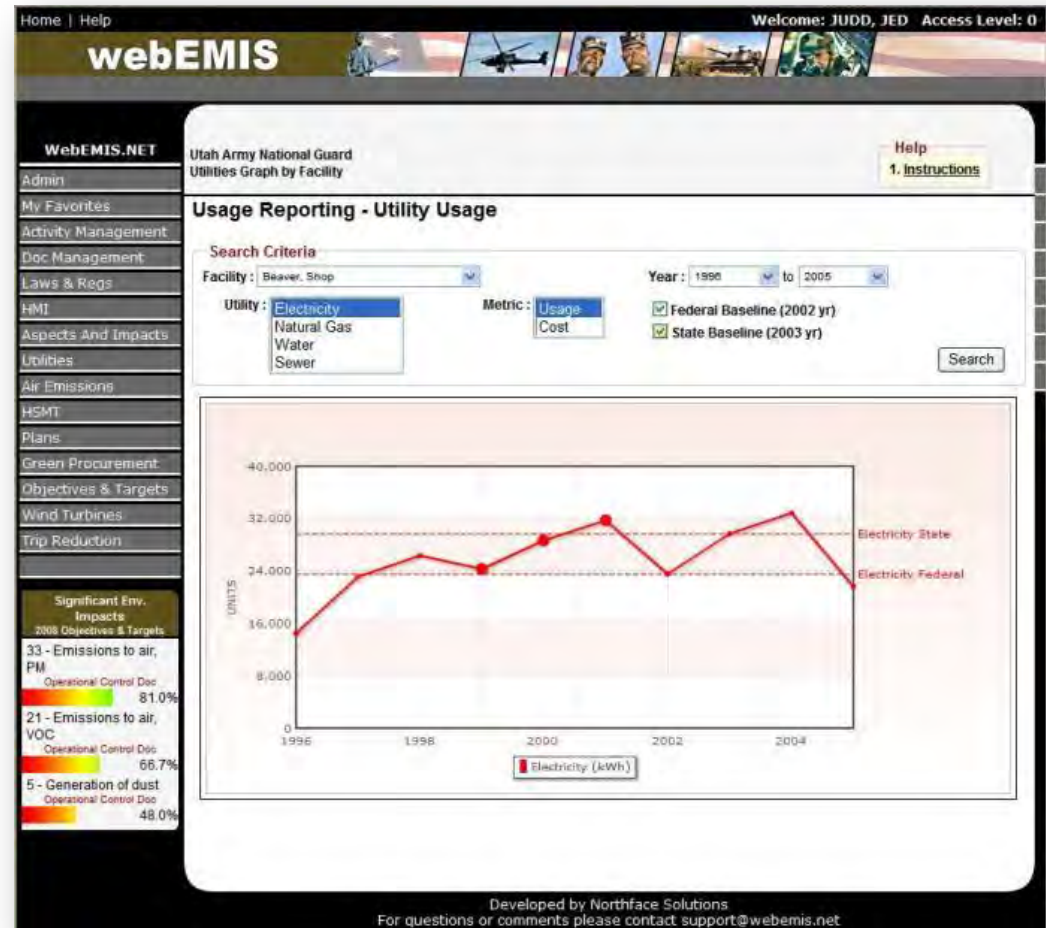


*Graphical Representations of
Environmental Data*

Establish Baselines to Measure Progress



- > Helps identify significant impacts
 - Compliance activities
 - Document review and expirations
 - Roles-based interface
 - Precise reporting for auditing



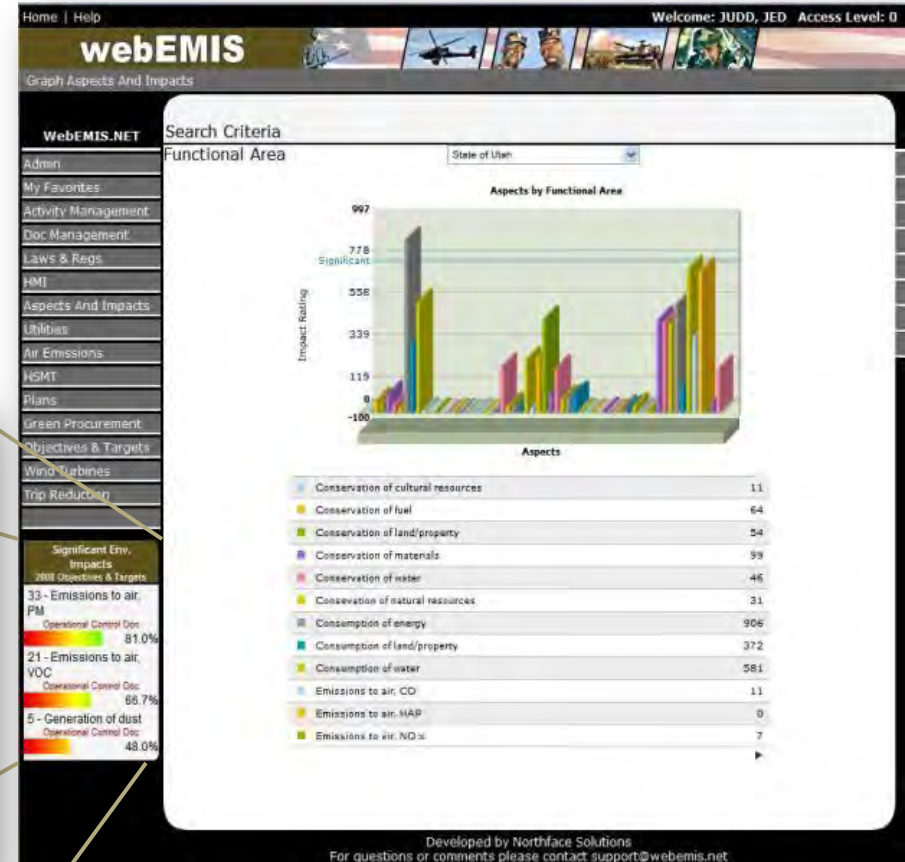
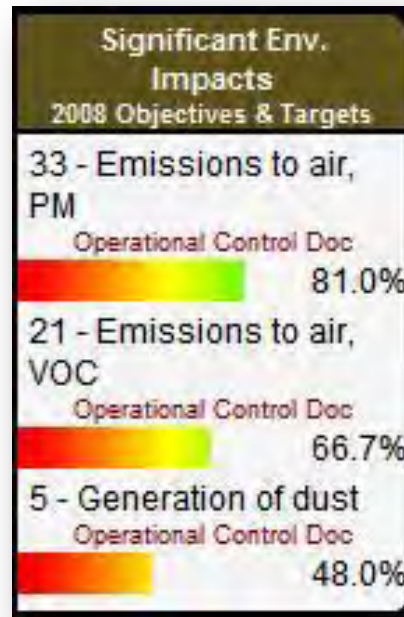
Graphical Representations of Environmental Data

Metrics Tracking and Reporting



- > Charts and graphs of relevant data
- > Early warning system
- > Dashboard

A dashboard of EMS metrics is always tracking progress.



A Robust EMS Solution

Activity and Project Calendar View



- > Calendar and email notifications through Microsoft Outlook
- > Multiple agencies can be shown in different colors

Home | Help

Welcome: JUDD, JED Access Level: 0

webEMIS

Calendar View Of My Activities

WebEMIS.NET

My Activities | Activities I Manage | Activities By Facility | Activities By Unit

Responsible: All Responsible

March 2008

Current Month | List View | Overdue (0) | Re-assign | Map View

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
24	25	26	27	28	29	1
2	3	4	5	6 Mandatory Paint Booth Training	7	8
9	10	11	12 Change Paintbooth Filters	13 Mandatory Paint Booth Training	14	15
16	17	18	19	20 Mandatory Paint Booth Training	21	22
23	24	25	26	27 Mandatory Paint Booth Training	28	29
30	31	1	2	3	4	5

Pending → Complete ✓ Complete - Late 🟡 Late - Not Complete ! Retired *

Current Month | List View | Overdue (0) | Re-assign | Map View

Significant Env. Impacts
2008 Objectives & Targets

24 - Emissions to air, other
Operational Control Doc 34.0%

2 - Generation of hazardous waste, solid
Operational Control Doc 58.0%

51 - Consumption of energy
Operational Control Doc

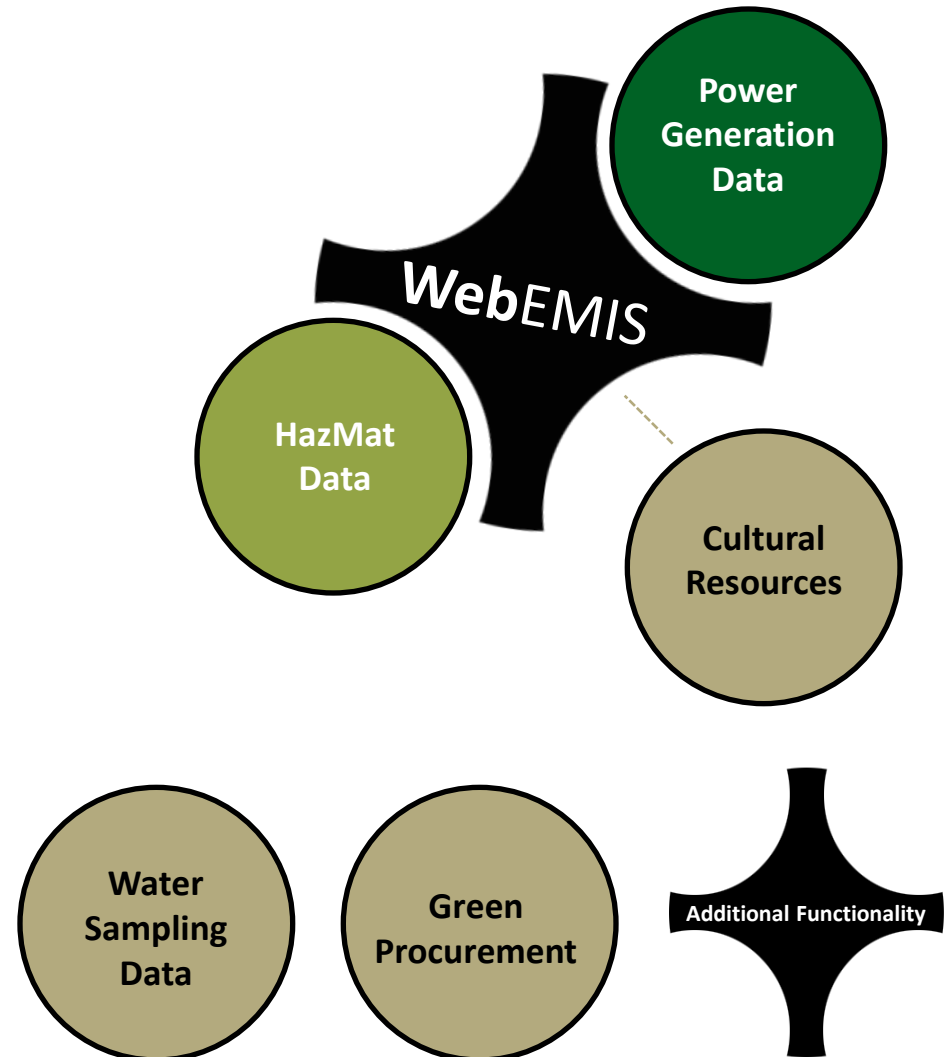
Pending → Complete ✓ Complete - Late 🟡 Late - Not Complete !

Linking to Metrics Data from External Systems

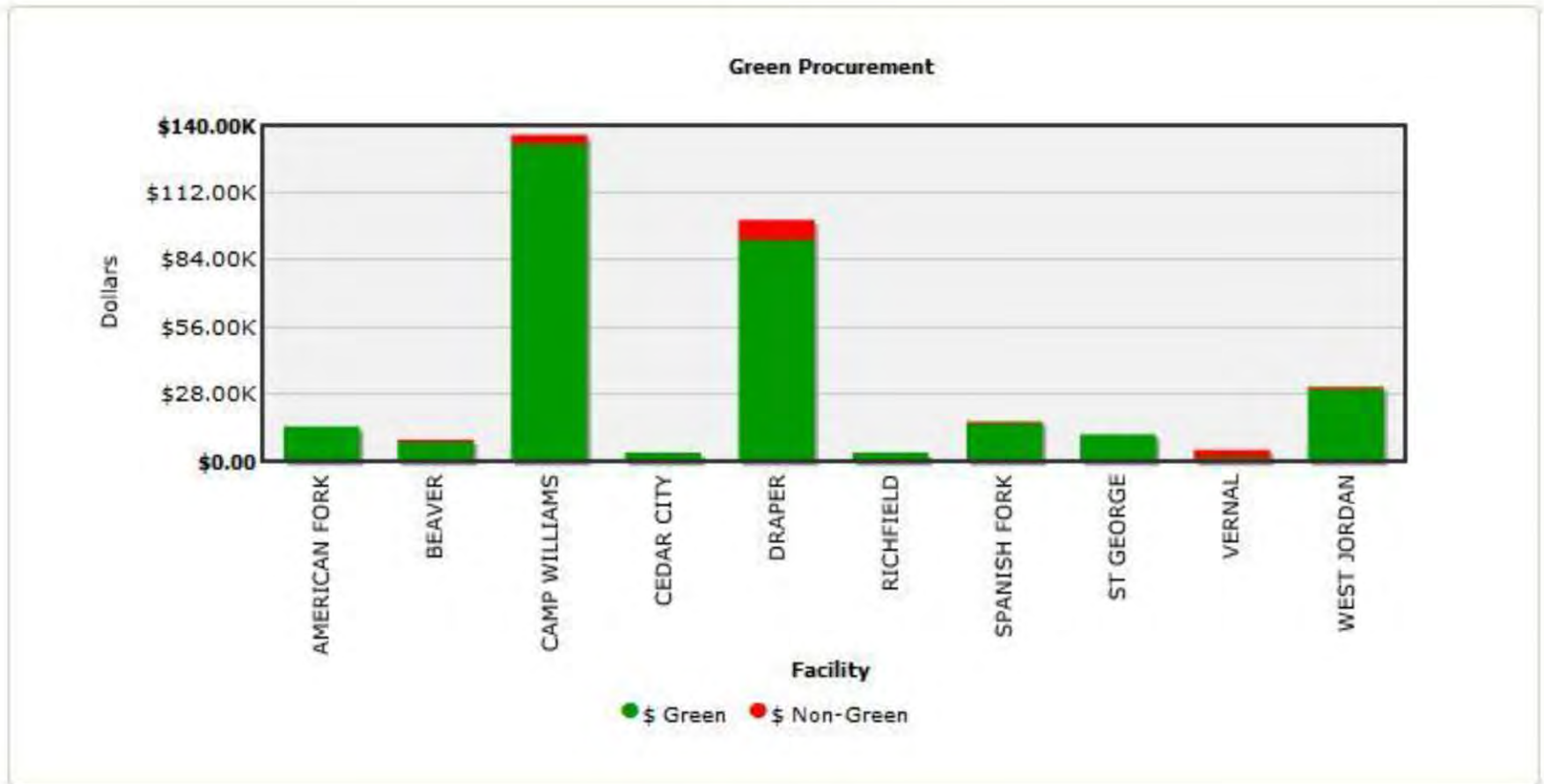


> Options

- Inspections
- Alternative Energy
- Green Procurement
- Training
- HazMaterial
- Water/WasteWater Sampling
- Cultural Resources



Example: Green Procurement



Example: Utility Usage



Electricity						
Record (1..12) of 12					Page 1 of 1	
Month	Cost	Usage	Units	Usage Graph	% Change	Add Note
January	\$465.80	3083.2	kWh		-%	
February	\$402.68	2755.6	kWh		-10.63%	
March	\$282.59	2932.4	kWh		+6.42%	
April	\$280.31	2615.2	kWh		-10.82%	
May	\$301.37	2698	kWh		+3.17%	
June	\$231.25	2250	kWh		-16.6%	
July	\$268.70	2256.8	kWh		+0.3%	
August	\$724.96	2889.2	kWh		+28.02%	
September	\$355.33	2073.6	kWh		-28.23%	
October	\$394.95	2872.4	kWh		+38.52%	
November	\$359.96	2280	kWh		-20.62%	
December	\$422.76	3040	kWh		+33.33%	



WebEMIS vs. ISO 14001 & EMS



ISO 14001 EMS Requirements	ISO14001 Requirement Condition	WebEMIS™
4.1 General Requirements	None	Uploads and stores EO 13423, EO 13423 instructions, and local EMS policy in order to continually improve environmental management systems
4.2 Environmental Policy	None	Provides framework for setting and reviewing environmental management systems
4.3 Planning	4.3.1 Environmental Aspects	Helps define aspects and impacts related to activities, products, and services at your installation
	4.3.2 Legal and Other Requirements	Uploads and manages documents that apply to aspects/impacts, objectives and targets
	4.3.3 Objectives, Targets, and Program	Formats and tracks objectives and targets to easily track progress based on a specific media
4.4 Implementation and Operation	4.4.1 Resources, Roles, Responsibility and Authority	Assigns accountability to each objective, target, and task
	4.4.2 Competence, Training and Awareness	Ensures training is completed and tracks progress with the option to incorporate an Learning Management System (LMS) module
	4.4.3 Communication	Provides internal and external communication for multiple media in one location
	4.4.4 Documentation	Stores all required documentation to ensure success of the EMS program, and associates required documents to aspects/impacts, objectives, targets, and tasks
	4.4.5 Control of Documents	Enables storage of most current revision and archival of past revisions, and allows for multiple reviewers for a single document
	4.4.6 Operational Control	Develops and documents operational controls (e.g. Environmental Management Plans [EMPs]), and automatically builds EMPs based on related data (aspects/impacts, objectives and targets)
	4.4.7 Emergency Preparedness and Response	Sets up tasks to review Emergency Preparedness and Response procedures
4.5 Checking	4.5.1 Monitoring and Measurement	Tracks progress of EMS, exports data for reporting, and allows for tracking based on media
	4.5.2 Evaluation of Compliance	Sets up audits to evaluate status of the EMS program
	4.5.3 Nonconformity, Corrective Action and Preventive Action	Provides visibility for identifying and correcting nonconformity
	4.5.4 Control of Records	Stores all records for completed tasks so results can be tracked
	4.5.5 Internal Audit	Schedules periodic audits of the EMS program
	4.5.6 Management Review	Provides top level management with metrics and performance measures based on media

WebEMIS vs. ISO 14001 & EMS



ISO 14001 EMS Requirements	ISO14001 Requirement Condition	WebEMIS
4.1 General Requirements	General Requirements	Uploads and stores EO 13423, EO 13423 instructions, and local EMS policy in order to continually improve EMSs
4.2 Environmental Policy	Environmental Policy	Allows management to document and define environmental policy
4.3 Planning	4.3.1 Environmental Aspects	Helps define aspects and impacts related to activities, products, and services. Stores and tracks all related data
	4.3.2 Legal and Other Requirements	Uploads and manages documents that apply to aspects/impacts, objectives and targets
	4.3.3 Objectives, Targets, and Program	Formats and tracks objectives and targets to easily track progress based on a specific media

WebEMIS vs. ISO 14001 & EMS



ISO 14001 EMS Requirements	ISO14001 Requirement Condition	WebEMIS
4.4 Implementation and Operation	4.4.1 Resources, Roles, Responsibility and Authority	Assigns accountability to each objective, target, and task
	4.4.2 Competence, Training and Awareness	Ensures training is completed and tracks progress. Could sync with an LMS
	4.4.3 Communication	Provides internal and external communication for multiple media in one location
	4.4.4 Documentation	Stores all required documentation to ensure success of the EMS program, and associates required documents to aspects/impacts, objectives, targets, and tasks
	4.4.5 Control of Documents	Enables storage of most current revision and archival of past revisions, and allows for multiple reviewers for a single document
	4.4.6 Operational Control	Documents operational controls associated with significant environmental aspects
	4.4.7 Emergency Preparedness and Response	Sets up tasks to review Emergency Preparedness and Response procedures

WebEMIS vs. ISO 14001 & EMS



ISO 14001 EMS Requirements	ISO14001 Requirement Condition	WebEMIS
4.5 Checking	4.5.1 Monitoring and Measurement	Tracks progress of EMS, exports data for reporting, and allows for tracking based on media
	4.5.2 Evaluation of Compliance	Ability to set up audits to evaluate status of the EMS program
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	4.5.4 Control of Records	Stores all records for completed tasks so results can be tracked
	4.5.5 Internal Audit	Schedules periodic audits of the EMS program
	4.5.6 Management Review	Provides management with metrics and performance measures based on media

UT ARNG Results



- > 15-minute review of
 - Liabilities
 - Accountability
- > Improvements in
 - Record keeping
 - Document control
- > Success with Metrics

Lessons Learned



- > Aspects and impacts
 - Goal setting
- > Involve all stakeholders
- > Focus on continual improvement
- > Keep it simple
- > Stay involved

Final Thoughts



- > Informed decisions stem from EMS tools that provide:
 - Dynamic data integration/management
 - Accountability: Roles-based Interface
 - Standards compliance
 - Management indicators





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